

REMARKS

After entry of this amendment, claims 12, 16-30, 34-40, 49, 56, 58, 73, and 76-86 are pending and rejected. New claims 87-89 have been added. Claims 47, 60, and 62 have been canceled without prejudice. Applicants reserve their right to prosecute subject matter of canceled claims in subsequent applications.

Claims 12, 49, 56, 73, 76, and 86 have been amended to recite the method makes plants resistant or tolerant of more than one virus selected from the group consisting of the viruses listed. Support is in the specification on page 18, second paragraph.

Claim 12 has been amended to recite the nucleotide fragment is at least 15 nucleotides in length. Support is on page 15, third paragraph.

Claims 49 and 56 have been amended to be dependent upon pending claim 76 to be in proper dependent claim format.

Claim 58 is amended to recite seeds produced from a transgenic plant.

Claim 81 has been amended to recite the replicase gene is 452 nucleotides in length. Support is in the specification on page 42, lines 26-27.

Claim 82 has been amended to recite the method of claim 81, wherein the portion of the replicase gene from BNYVV is from nucleotide 5168 to nucleotide 5620 of Genbank accession no. D00115. Support is in the specification on page 42.

New claims 87-89 have been added to recite the method of claim 12 wherein the RNA fragment is at least 50, 150 or 500 nucleotides in length. Support is in the specification on page 15, third paragraph.

No new matter has been added by these amendments.

Claim Rejections under 35 USC § 112, second paragraph

Claims 47, 49, 56, 58, and 86 are rejected under 35 USC § 112, second paragraph, for allegedly being indefinite.

Claims 47, 49, 56, 58 and 86 were dependent upon canceled claims 46 or 60. Claims 47 and 62 have been canceled without prejudice, and claims 49 and 56 are dependent upon pending claim 76. Claims 58 and 86 are now dependent upon corrected claim 56.

Claim 58 [sic 56] has been amended to recite seeds produced from the plant of claim 56.

These amendments overcome and obviate these rejections, and Applicants respectfully request their withdrawal.

Claim Rejection under Section 112, first paragraph

Claims 1, 5-12, 16-30, 34-40, 62, 73 and 76-85 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the

application was filed, had possession of the claimed invention. In particular, the Office action contends that the sequence of the BNYVV RNA1 was not provided because the database containing the accession no. D00115 was not proved to be available as of the filing date of this application. Further, the office action points out that the specification does not provide support for the recitation of "at least 21 nucleotides in length".

Applicants respectfully disagree with this rejection.

The BNYVV RNA1 nucleotide sequence was available to those of ordinary skill in the art who would have known to search the available publications on the BNYVV virus genome sequences that were published by Bouzoubaa et al. J. Gen Virol. 68:615-26 (1987) was originally published in 1987, and originally submitted to Genbank having accession no. D00115 on December 22, 1987. As of the filing date of the priority application on May 26, 1998, there was a replacement version available which was updated as of April 18, 1998. Copies of the revision history for D00115 and the originally filed sequence dated December 22, 1987 and updated version available at the time the application was filed (dated April 18, 1998) are attached as Exhibits 1-3. Therefore, the nucleotide sequence of the BNYVV virus was available to those of ordinary skill in the art by searching the available databases.

As recommended by the Examiner, the specification on page 42, Example 9 was already amended in the response dated February 11, 2004 to correct the typographical error in the accession no., and claim 82 has been amended to recite the Sequence identifier.

Regarding the lower limit for fragment size to produce RNA silencing, claim 12 has been amended to recite the lower limit of at least 15 nucleotides as pointed out in the specification on page 15. Further, new claims 87-89 have been added to recite the RNA fragments are at least 50, 150 or 500 nucleotides in length.

These amendments and remarks overcome these rejections, and applicants respectfully request their withdrawal.

Claims Rejections under 35 USC §103

Claims 1, 5-12, 16-30, 34-40, 62, 73 and 76-85 are rejected under 35 USC § 103(a) as allegedly being unpatentable over Fire et al. (US Patent No. 6,506,559) in combination with de Haan et al. (J. Gen. Virol. 1991, 71:2207-2216), Maiss et al. (J. Gen. Virol. 1989, 70:513-24), Saito et al. (Arch. Virol. 1996, 141:2163-075), Hsu et al. (Arch. Virol. 1995, 140:1841-47), Miki et al. (Procedures for Introducing Foreign DNA into Plants, In Methods in Plant Molecular Biology and Biotechnology, 1993), Applicants admitted state of the prior art, and Keddie et al. (Plant Mol. Biol. 1994, 24:327-340).

Most important, "obvious to try" a particular experiment or combination is not the appropriate standard for determining obviousness. In re Lindell, 385F.2d 453, 15 U.S.P.Q. 521 (C.C.P.A. 1967).

While applicants disagree with this rejection, the presently amended claims recite that the method is to make plants resistant or tolerant to more than one virus selected from the specified group of viruses. Fire does not describe or teach resistance to multiple viruses and therefore, does not make obvious the present claims.

The above remarks overcome this rejection and Applicants request its withdrawal.

CONCLUSION

The above amendments and remarks overcome or obviate the above rejections and put the application in form for allowance.

The Commissioner is hereby authorized to charge any additional fees under 37 CFR §1.17 which may be required, or credit any overpayment, to Account No. 50-1744 in the name of Syngenta.

Respectfully submitted,

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Research Triangle Park, NC 27709-2257
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Date: 9/8/04



Mary Kakefuda
Agent for Applicants
Reg. No. 39,245



Sequence Revision History

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221059	1	Apr 29 1993 11:56 AM	Dead	<input type="radio"/>	<input type="radio"/>

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☐ 1: D00115[gi:221059] This record was replaced or removed. See [revision history](#) for details.

LOCUS BNYVVR1 6746 bp ss-RNA linear VRL 22-DEC-1987
DEFINITION Beet necrotic yellow vein mosaic virus RNA-1.
ACCESSION D00115
VERSION D00115 GI:221059
KEYWORDS BNYVV; RNA-1; RNA1.
SOURCE Beet necrotic yellow vein mosaic virus
ORGANISM Beet necrotic yellow vein mosaic virus
Viruses; ssRNA positive-strand viruses, no DNA stage; Tobamovirus.
REFERENCE 1 (bases 1 to 6746)
AUTHORS Bouzoubaa,S., Quillet,L., Guilley,H., Jonard,G. and Richards,K.
TITLE Nucleotide sequence of beet necrotic yellow vein virus RNA-1
JOURNAL J. Gen. Virol. 68, 615-626 (1987)
COMMENT Beet necrotic yellow vein virus (BNYVV) is a multicomponent soil-borne rod-shaped virus responsible for a severe disease of sugarbeet called rhizomania. BNYVV contains four single-stranded 5'-capped and 3'-polyadenylated plus-sense RNA molecules. In [J. Gen. Virol. 68, 615-626 (1987)], they report the complete sequence for RNA-1, thus completing the molecular description of the BNYVV genome. Base sequences of the other three genome RNAs have already been published by the same authors.

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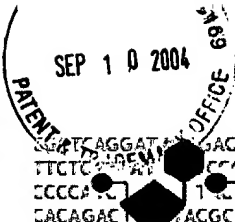
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Jul 27 2004 13:33:12



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☐ 1: D00115[gi:221059] This record was replaced or removed. See [revision history](#) for details.

LOCUS BNYVVR1 6746 bp RNA linear VRL 16-APR-1998
DEFINITION Beet necrotic yellow vein mosaic virus genome RNA-1, complete sequence.

ACCESSION D00115
VERSION D00115.1 GI:221059
KEYWORDS RNA-1.

SOURCE Beet necrotic yellow vein virus
ORGANISM Beet necrotic yellow vein virus

REFERENCE 1 (bases 1 to 6746)
AUTHORS Bouzoubaa,S., Quillet,L., Guilley,H., Jonard,G. and Richards,K.

TITLE Nucleotide sequence of beet necrotic yellow vein virus RNA-1
JOURNAL J. Gen. Virol. 68, 615-626 (1987)

COMMENT [WARNING] On Feb 25, 2002 this sequence was replaced by a newer version gi:60642.

Beet necrotic yellow vein virus (BNYVV) is a multicomponent soil-borne rod-shaped virus responsible for a severe disease of sugarbeet called rhizomania. BNYVV contains four single-stranded 5'-capped and 3'-polyadenylated plus-sense RNA molecules. In [1], they report the complete sequence for RNA-1, thus completing the molecular description of the BNYVV genome. Base sequences of the other three genome RNAs have already been published by the same authors.

FEATURES Location/Qualifiers

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